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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/805,690 | 03/22/2004 | Herbert A. Bankstahl | ITW7510.091 | 8728 |
| 33647 | 7590 | 07/25/2005 | EXAMINER | |
| ZIOLKOWSKI PATENT SOLUTIONS GROUP, SC (ITW) 14135 NORTH CEDARBURG ROAD MEQUON, WI 53097 | | | HOPKINS, ROBERT A | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1724 | |

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/805,690 | BANKSTAHL ET AL. | |
| | Examiner | Art Unit | |
| | Robert A. Hopkins | 1724 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 24-36 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 24-36 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3-22-04</u> . | 6) <input type="checkbox"/> Other: ____ |

Handwritten initials/signature

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 24-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 24 line 7 recites "the second outlet". There is a lack of antecedent basis for "the second outlet" in previous claim limitations. Correction is requested. Claims 25-29 depend on claim 24 and hence are also rejected.

Claim 29 line 3 recites "the first outlet". There is a lack of antecedent basis for "the second outlet" in previous claim limitations. Correction is requested.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Lehman(3900300).

Lehman teaches a liquid separator for separating liquid from a stream of fluid comprised of liquid and gaseous components, the liquid separator comprising a cylindrical housing(1) having an upper portion, a bottom and an inner surface, an inlet(2) located in the cylindrical housing for receiving the stream of fluid, a liquid outlet(13) in the bottom of the cylindrical housing to remove liquid from the cylindrical

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housing, the liquid outlet being located generally centrally in the bottom, a fluid outlet(20) located in the upper portion of the cylindrical housing for removing the stream of fluid therefrom, a deflector baffle(3) within the cylindrical housing proximate to the inlet to direct the stream of fluid so as to flow generally circularly and downwardly around the inner surface of the cylindrical housing toward the liquid outlet, and a plurality of radially directed baffles(14) located at the bottom of the cylindrical housing to halt the circular motion of the stream of fluid from the inlet and to redirect the stream radially inwardly toward the liquid outlet whereby the liquid can be removed by means of the liquid outlet and fluid separated therefrom can be removed from the fluid outlet. Lehman further teaches wherein the inlet is located in the upper portion of the cylindrical housing. Lehman further teaches wherein the radially directed baffles are located in a lower chamber in the housing.

Claims 24,27,28 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Lehman(3900300).

Lehman teaches an oil separator comprising a housing having an inlet, an oil outlet, and a fluid outlet, a first baffle(3) positioned proximate the inlet and constructed to direct a fluid flow from the inlet about an inner surface of the housing, and a second baffle(14) positioned about the oil outlet and configured to direct a flow of oil carried on the fluid flow about the inner surface of the housing toward the oil outlet and a remaining fluid flow toward the second outlet. Lehman further teaches wherein the second baffle further comprises a plurality of radial ribs wherein a channel is formed between adjacent ribs and is in fluid communication with adjacent channels about the

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first outlet. Lehman further teaches wherein the first outlet and second outlet are on generally opposite sides of the housing.

Claims 30,32,33 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Evans(2849079).

Evans teaches an oil separator comprising an enclosure(10) having a first chamber and a second chamber, the first chamber constructed to centripetally separate an incoming flow of two fluids, and a partition(29) positioned between the first chamber and the second chamber and having an opening therebetween, the partition constructed to maintain the centripetal separation generated in the first chamber. Evans further teaches wherein the partition has a shape that substantially matches a cross sectional shape of the enclosure. Evans further teaches an air outlet(14) in fluid communication with the first chamber and an oil outlet(19) in fluid communication with the second chamber. Evans further teaches a plurality of baffles(30) formed in the second chamber constructed to radially redirect a flow through the opening between the first chamber and second chamber. Evans further teaches wherein the first chamber is located above the second chamber.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 30-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehman(3900300) taken together with Evans(2849079).

Lehman teaches an oil separator comprising an enclosure(1) having a first chamber and a second chamber, the first chamber constructed to centripetally separate an incoming flow of two fluids. Lehman is silent as to a partition positioned between the first chamber and the second chamber and having an opening therebetween, the partition constructed to maintain the centripetal separation generated in the first chamber. Evans teaches an oil separator comprising an enclosure(10) having a first chamber and a second chamber, the first chamber constructed to centripetally separate an incoming flow of two fluids, and a partition(29) positioned between the first chamber and the second chamber and having an opening therebetween, the partition constructed to maintain the centripetal separation generated in the first chamber. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a partition positioned between the first chamber and second chamber of Lehman to separate radially flowing gas above the plate from separated liquid beneath the plate and thereby reduce reintrainment of separated liquid in the effluent gas stream(column 4 lines 71-73 of Evans).

Lehman further teaches a baffle(3) positioned in the first chamber constructed to direct the incoming flow in a direction generally tangential to the enclosure. Evans further teaches wherein the partition has a shape that substantially matches a cross sectional shape of the enclosure. Lehman further teaches an air outlet(20) in fluid communication with the first chamber and an oil outlet(13) in fluid communication with

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the second chamber. Lehman further teaches a plurality of baffles(14) formed in the second chamber constructed to radially redirect a flow through the opening between the first chamber and second chamber. Lehman further teaches wherein the first chamber is located above the second chamber.

Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehman(3900300) taken together with Evans(2849079).

Lehman teaches all of the limitations of claim 4 but is silent as to wherein the lower chamber is formed by a baffle plate affixed to upper edges of the radially directed baffles. Evans teaches an oil separator comprising an enclosure(10) having a first chamber and a second chamber, the first chamber constructed to centripetally separate an incoming flow of two fluids, and a baffle plate(29) positioned between the first chamber and the second chamber and having an opening therebetween, and radially directed baffles attached to the baffle plate. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a baffle plate affixed to upper edges of the radially directed baffles of Lehman to separate radially flowing gas above the plate from separated liquid beneath the plate and thereby reduce reintrainment of separated liquid in the effluent gas stream(column 4 lines 71-73 of Evans).

Evans further teaches wherein the baffle plate is circular forming an annular slot between the baffle plate and the inner surface of the cylindrical housing. Lehman further teaches wherein the radially directed baffles form radial channels within the

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bottom of the housing to direct the stream of fluid radially inwardly toward the liquid outlet.

Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehman(3900300) taken together with Evans(2849079).

Lehman teaches all of the limitations of claim 25 but is silent as to wherein the second baffle further comprises a plate positioned between the inlet and oil outlet. Evans teaches an oil separator comprising an enclosure(10) having a first chamber and a second chamber, and a second baffle(29) positioned between an inlet and oil outlet. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a second baffle positioned between an inlet and oil outlet of Lehman in order to separate radially flowing gas above the plate from separated liquid beneath the plate and thereby reduce reintrainment of separated liquid in the effluent gas stream(column 4 lines 71-73 of Evans).

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lehman(3900300) taken together with Derocher(2515398).

Lehman teaches all of the limitations of claim 29 but is silent as to a mounting plate attached to an exterior surface of the housing. Derocher teaches a centrifugal separator(10) and a mounting plate(11) attached to an exterior surface of the housing. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a mounting plate attached to an exterior surface of the housing of Lehman to place the housing at a certain height above a floor or base(column 2 lines 1-4).

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Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lehman(3900300) taken together with Evans(2849079) in view of Derocher(2515398).

Lehman taken together with Evans teaches all of the limitations of claim 36 but is silent as to a mounting plate attached to an exterior surface of the housing. Derocher teaches a centrifugal separator(10) and a mounting plate(11) attached to an exterior surface of the housing. It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a mounting plate attached to an exterior surface of the housing of Lehman to place the housing at a certain height above a floor or base(column 2 lines 1-4).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Trapp(6071321) discloses a liquid separator connected to a source of compressed gas.

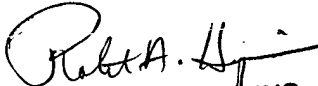
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Hopkins whose telephone number is 571-272-1159. The examiner can normally be reached on Monday-Friday, 7am-4pm, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rah
July 21, 2005


ROBERT A. HOPKINS
PRIMARY EXAMINER
A.U. 1724